contend that dysgenic selection and widespread marital unhappiness will continue until sterilization and abortion are made legally available to any parent of two children.

B. DUNLOP.

20 Glenalmond House,
Manor Fields, S.W.15.

Professor J. B. S. Haldane's Criticism

To the Editor, Eugenics Review

SIR,—In your issue of January 1937 (p. 334) Professor Gates writes that Lus "found that in crosses between yaks and Kirghizian cattle the F_1 female hybrids are fully fertile when crossed back with either parent species, while the male F_1 hybrids are at least partially fertile." This was in response to a statement of mine that they were sterile. If Professor Gates's statement, which he quotes from his own book on human heredity, is correct, it is evident that I owe him a humble apology, and am unfit to hold a chair of Genetics.

But on p. 93 of Vol. 7 of the *Bulletin of the Bureau of Genetics* (Leningrad, 1929) Lus states: "Thus it is evident that the first and second generation male hybrids studied by us are completely sterile." This confirmed Kühn's earlier work. The testes contained no spermatozoa. The fact that, according to Lus, the Khirgiz nomads regarded these male hybrids as fertile is not in my opinion an adequate reason for accepting the compromise that they are partially fertile.

Dr. Cattell writes that his statement as to the inheritance of feeble-mindedness "was obviously intended as one of a number of general introductory approaches to the subject of intelligence inheritance for the non-technical reader," and then proceeds to chide those who "look for precision regarding a concept which is by its nature incapable of being used precisely." In fact he draws a sharp distinction between scientific and propagandist statements and evidently classes his own with the latter. As however he has now apparently withdrawn his statement that 75 per cent. of the children of the feeble-minded are feeble-minded, in favour of the quite different statement that 75 per cent. of the children of *two* mentally defective parents are defective, I see no reason to pursue the matter further.

J. B. S. HALDANE.

John Innes Horticultural Institution,
Mostyn Road, London, S.W.19.

To the Editor, Eugenics Review

SIR,—The statement in *Heredity in Man* (p. 302) to which Professor Haldane refers was derived from a paper of Lus in Vol. 5 of the *Bulletin of the Bureau of Genetics and Eugenics* (Leningrad, 1927) where he says (p. 77): "our observations fully confirm Kühn's experimental data on complete fertility in female hybrids in the first and in subsequent generations in back-crosses of F_1 hybrids with both parental species. As to the fertility of male hybrids, information from natives shows at least a partial fertility of male hybrids, including the first generation." He then cites from his own experiments two pedigrees, in both of which males of mixed descent are shown as having produced offspring, whose colour is indicated in the pedigree.

Professor Haldane's previous letter misled me, and no doubt others as well, into supposing that the papers he cited represented work carried out more recently and therefore with greater accuracy. These papers were, however, all cited by Lus in 1927. The work of Boyd was published in 1908, that of Ivanov and Philipchenko in 1915, while for the work of Kühn we must go back to 1882!

My book therefore gave an accurate statement of the case at the time it was written. More recent work seems to indicate that the male hybrids are in fact completely and not partially sterile. I am not, however, a prophet, and could not predict in 1929 what later work might bring forth. Any apology from Professor Haldane would therefore need to be based on his assumption that a scientific man should be a prophet as well.

R. RUGGLES GATES.

King's College,
Strand, W.C.2.

Positive Eugenics by Restraint

To the Editor, Eugenics Review

SIR,—In connection with the controversy regarding the effect of frequent intercourse on the quality of offspring,* may I suggest that it would be more fruitful to consider the facts from the experimenter and animal breeder rather than to construct ingenious hypotheses. Surely much evidence of a highly relevant character does exist. Perhaps I may be permitted to refer to a valuable study by R. M. G. Gunn of Sydney entitled *Fertility in Sheep* (*Bulletin* 94, 1936. Council for Sc. and Ind. Research. Australia). It is there stated that "ejaculations as frequent as once per day do not cause any decrease in the volume of the ejaculum or in the motility of the contained spermatozoa." The author suggests moreover that the rapid removal of spermatozoa is a stimulus to their further production and the absence of periodic emission reduces the rate of production (pp. 83-4). Even more significant is the evidence cited about ejacula after prolonged sexual rest. "According to Walton the number of spermatozoa after a prolonged sexual repose may be normal or slightly below the average but many senescent cells may be present and motility may not be high. Polowzow says that if stallions do not copulate, spermatozoa collect in the epididymus and degenerate.

* EUGENICS REVIEW, 1936, XXVIII, 84, 247; 1937, XXVIII, 341.